

ORDER 450.1 ENVIRONMENTAL
PROTECTION PROGRAM
WORKSHOP

ENVIRONMENTAL
MONITORING

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EMS APPROACH TO MONITORING

- OA REPORT ON ENVIRONMENTAL MONITORING SURVEILLANCE AND CONTROL PROGRAMS AT DOE
- SUCCESSFULLY ADDRESS REMEDIATION OF EXISTING CONTAMINATION
- EXPECTATIONS NOT CONSISTENTLY UNDERSTOOD
- INSUFFICIENT RESOURCES APPLIED TO ENVIRONMENTAL MONITORING

EMS APPROACH TO MONITORING

- ORDER DOE 5400.1, CHAPTER IV
- FRAMEWORK FOR EMS GUIDANCE
- EFFLUENTS/EMISSIONS
- PRE-OPERATIONAL
- METEOROLOGICAL
- ENVIRONMENTAL SURVEILLANCE
(AIR, GROUND WATER, ETC.)

EMS APPROACH TO MONITORING

- ALL MONITORING INTEGRATED
- MONITORING NETWORK(S)
DESIGNED FOR SPECIFIC DATA
NEEDS
- NETWORKS OPTIMIZED REGULARLY
- EMPHASIS ON LONG-TERM
- MONITORING DETERMINED BY
PROGRAM NEEDS ASSESSMENTS

CRITERIA FOR OPTIMIZING SITE-WIDE MONITORING

- PROVIDES QUANTITATIVE
SUBSURFACE QUALITY DATA FOR
RESOURCE MANAGEMENT
- PROVIDES SPECIFIC GW QUALITY
DATA FOR REGULATORY
COMPLIANCE

CRITERIA FOR OPTIMIZING SITE-WIDE MONITORING

- MAINTAINS DOCUMENTATION OF SIZE AND SCOPE OF SITE-WIDE PROGRAM
- DESIGNS NETWORKS FOR EACH SPECIFIC PURPOSE
- ENSURES EFFICIENCY AND COST-EFFECTIVENESS
- ENSURES THAT DATA MEETS USERS NEEDS

CRITERIA FOR OPTIMIZING SITE-WIDE MONITORING

- INCLUDES PROCESSES FOR
CONTINUOUS IMPROVEMENT
- INVESTIGATES ALTERNATIVE
METHODS
- ANALYZES TRENDS IN
ENVIRONMENTAL QUALITY
- ENSURES DATA COMPARABILITY

GW MONITORING PROGRAM ELEMENTS

- SAMPLING/ANALYSIS PLANS
- SURVEILLANCE NETWORK
- CONTINGENCY PLANS
- SITE-WIDE VULNERABILITY
ASSESSMENT PROCESS
- SUBSURFACE CHARACTERIZATION
PROCESS

GW MONITORING PROGRAM ELEMENTS

- PRIORITIZATION SYSTEM
- DATA MANAGEMENT/REPORTING SYSTEM
- WELL MAINTENANCE PLAN
- WELL ABANDONMENT PROCEDURES
- QA/QC PROCEDURES
- EXTERNAL PEER REVIEW PROCESS